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## Periodic Atlas of the Metroscope: Seeing the Past in the Present - A Snapshot of the Relationship between Urban Growth and Transportation

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# Periodic Atlas of the Metroscope

## Seeing the Past in the Present:

### A Snapshot of the Relationship between Urban Growth and Transportation

by Meg Merrick

We live with history. It's evident in the architecture that surrounds us and the urban form that directs our lives. With this edition of the periodic atlas, we explore the waves of growth and changes in urban form that have occurred over the last century in Metro's tri-county region using historic maps and the year-built information provided by Metro's Regional Land Information System (RLIS) for tax lots. The November 2010 RLIS database includes year-built information for 499,271 tax lots — nearly all of which are single-family or multi-family dwellings in Clackamas, Multnomah, and Washington counties. Using the statistical method called “natural breaks” to identify clear groupings of the year-built data (for existing buildings only), the analysis identifies six time periods: 1846 to 1903; 1904 to 1919; 1920 to 1940; 1941 to 1964; 1965 to 1987; and 1988 to 2010. The tax lots included in the maps are color-coded based on these time periods.

Keep in mind that the residential structures in the maps do not represent a complete picture of the past. Many dwellings, for example, once occupied the commercial and industrial areas of inner southwest Portland, the central eastside of Portland (west of S.E. 12th), and the Coliseum and the Emmanuel Hospital areas in inner northeast Portland. In addition, over time, many homes were

removed for state highway and interstate freeway construction.

#### **Urbanization, Rivers, and Pedestrian Access**

Urban form is strongly related to the ways in which people and goods move through space. Figure 1, which includes Oregon's first survey map (circa 1852), shows all of the significant urbanized areas during this period adjacent to the Willamette River that would allow for the efficient movement of goods. Oregon City is located at the terminus of the Oregon Trail at the edge of the Willamette; Portland is located near to the confluence of the Willamette and the Columbia rivers; and Milwaukie is located on the river between the two. During a time when most people walked to where they needed to go, the survey indicates that all of these cities were spatially nodal and were laid out in a grid pattern on land that is relatively flat so as to allow for easy pedestrian access. One could walk from one end to the other of any of these cities within 15 minutes (one-half mile).

#### **The Trolley Car Era**

In 1872, Ben Holladay formed the Portland Street Railway Company to run a horse-car line along First Avenue, between NW Glisan and SW Caruthers. Over the next decade, the Multnomah Street Railway Company and the Transcontinental Street Railway Company expanded the



horse-car service to northwest Portland and west of downtown. In 1888, the Willamette Bridge Railway Company brought service to the east side of the Willamette River via the Morrison Bridge, and also provided the first steam service to town. In 1889, the Willamette Bridge Railway Company brought electrification to Portland's growing trolley system on its Albina line that crossed the Steele Bridge. Trolley service came to the West Hills by the Portland Cable Railway Company with the importation of cable cars from San Francisco. The next twenty years was a period of both mergers of street railway companies and an expansion of the railway network so that by 1906, the newly consolidated Portland Railway, Light and Power Company (PRL&P) controlled the entire system's 28 streetcar and interurban lines.

Figure 2 displays the entire trolley network in Portland as depicted in a 1924 Pittmon's Portland Official Guide while overlaying extant buildings in 2010 by year-built. Although many buildings that were built during this time have been torn down, the long-lasting effect of the trolley lines on the pattern of development in the city can be clearly seen. The economic stresses of the Great Depression, the emergence of the gasoline bus (that began in the 1930s in Portland), and the growing popularity of the automobile marked the decline of Portland's trolley system. Portland's trolley era ended in 1958 with the cessation of the interurban passenger service between Portland and Oregon City (<http://mysite.ncnetwork.net/res130s1r/Chronology.html>).

Figure 3, includes year-built data for this transitional period prior to the

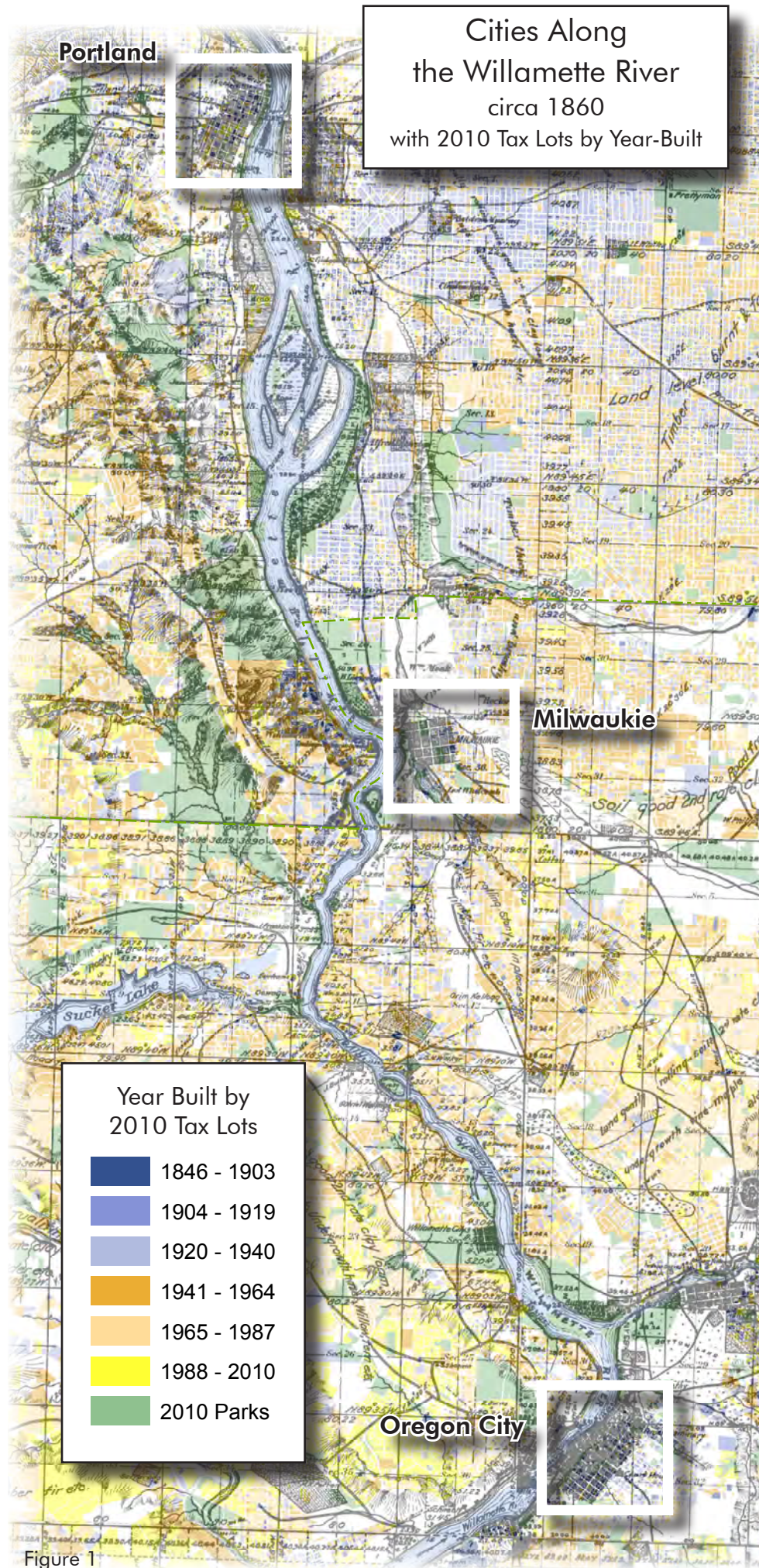


Figure 1



opening of the interstate freeway system. It shows the expansion of growth to cheap land far beyond the reach of the trolley system to unincorporated areas east of Portland and spilling over the west hills to Beaverton. We can also see the beginning of cul-de-sac developments in these new suburbs.

### **Freeway Era**

The interstate highway system, made possible by the passage of the 1956 Interstate Highway Act, and the ever-increasing number of households owning automobiles had a profound effect on the growth of the region. As happened throughout the nation, the freeway system allowed for the rapid development of residential housing on land much farther from the city center, irrespective of topography (rail systems are sensitive to topography). Interstate 5, which cut through residential areas north and south of the downtown core, was completed in 1966. Interstate 405, which bypasses the western edge of Portland's downtown, was initially opened in 1969 and completed 1973, the year that the Fremont Bridge opened to connect I-405 to I-5 to the north.

According to the Oregon Department of Transportation, the construction of I-205, which bypasses the city on the eastside, was one of the most delayed and controversial of Oregon's highways and was the last of the proposed I-5 connector loops to be constructed. Because of the controversies about the locations of various segments of the freeway, construction lasted fifteen years, from 1968 to 1983. Figure 4 illustrates the initial expansion of suburban growth, throughout the region that occurred during the freeway era between 1965 and 1984. It was also during this period that policymakers in Portland and in Salem

began to be concerned about suburban leapfrog development on prime farm land. As a result, Senate Bill 100, which requires municipalities to create urban growth boundaries (UGBs) beyond which urban development cannot occur, was passed in 1973. The Columbia Region Association of Governments (CRAG), Metro's predecessor, engaged in a comprehensive planning process and proposed the region's first urban growth boundary in 1977.

### **Post 1980s Expansion**

According to Metro, more than 25,000 acres have been added to the UGB since 1977. Figure 5 shows the period of explosive growth that occurred after Oregon's recession during the 1980s. Within the UGB, this growth is characterized by smaller lot sizes and infill development as well as by development on steep hills, such as the area immediately west of Forest Park, at the edges of the UGB, and on exception lands. Sherwood is an example of a city that grew almost entirely during this period—very differently from its original downtown grid, which is visible in this map.

Anticipating urban growth and its accompanying costs in terms of air quality and fossil fuel, Trimet, the region's transit agency, began to rethink the desirability of commuter rail service for the region. In 1986, it opened its first light rail line from Gresham to downtown Portland. Since then, four more lines have been built with an additional line from Milwaukie to downtown Portland on its way. According to Trimet, more than \$6 billion in development has occurred along MAX lines since the decision to build in 1978. **M**



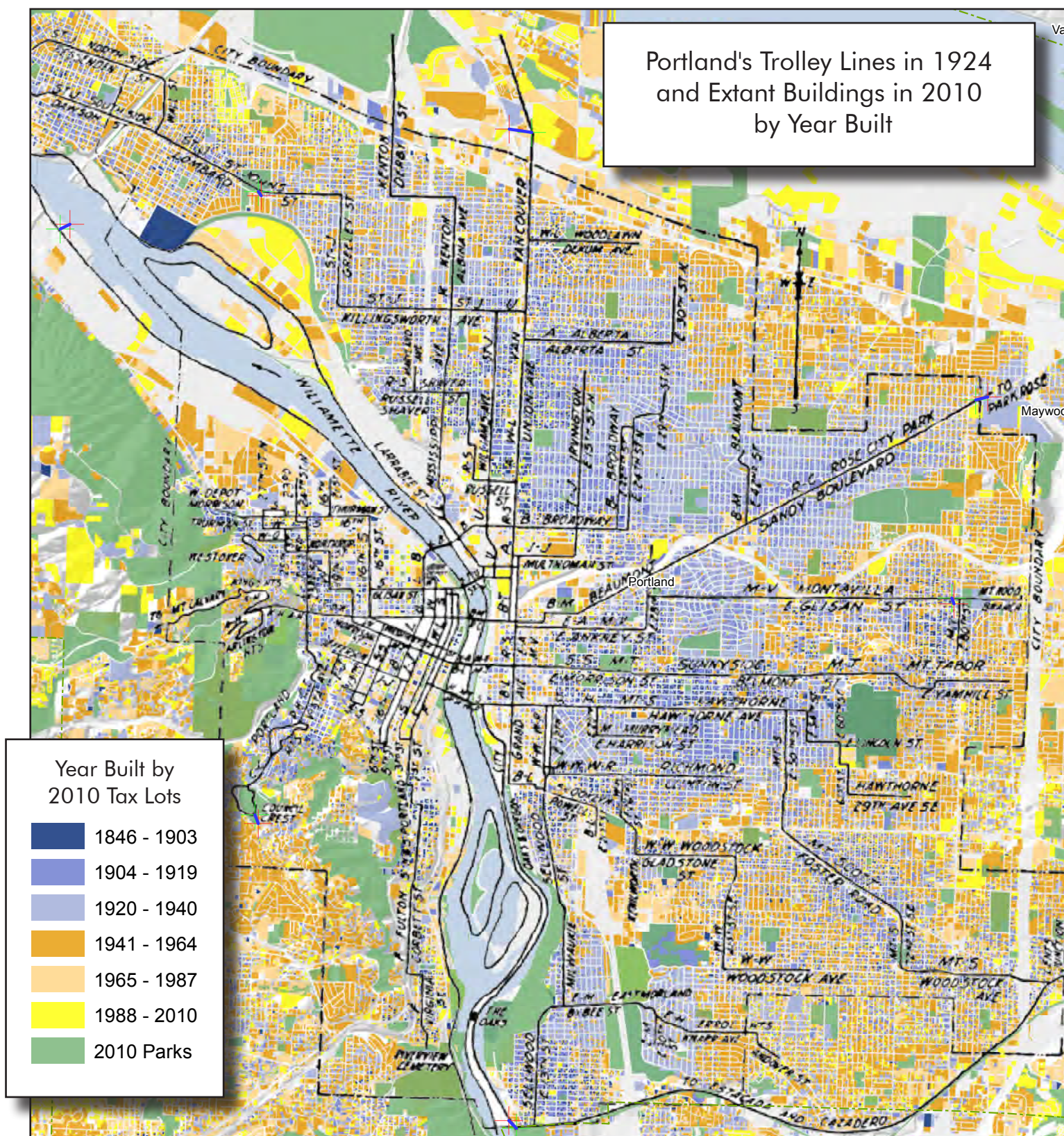


Figure 2

Sources: Metro's RLIS, Nov. 2010;

Trolley lines were extracted from a 1924 Pittmon's Map available at:

<http://mysite.ncnetwork.net/res130s1r/1924Map.html>



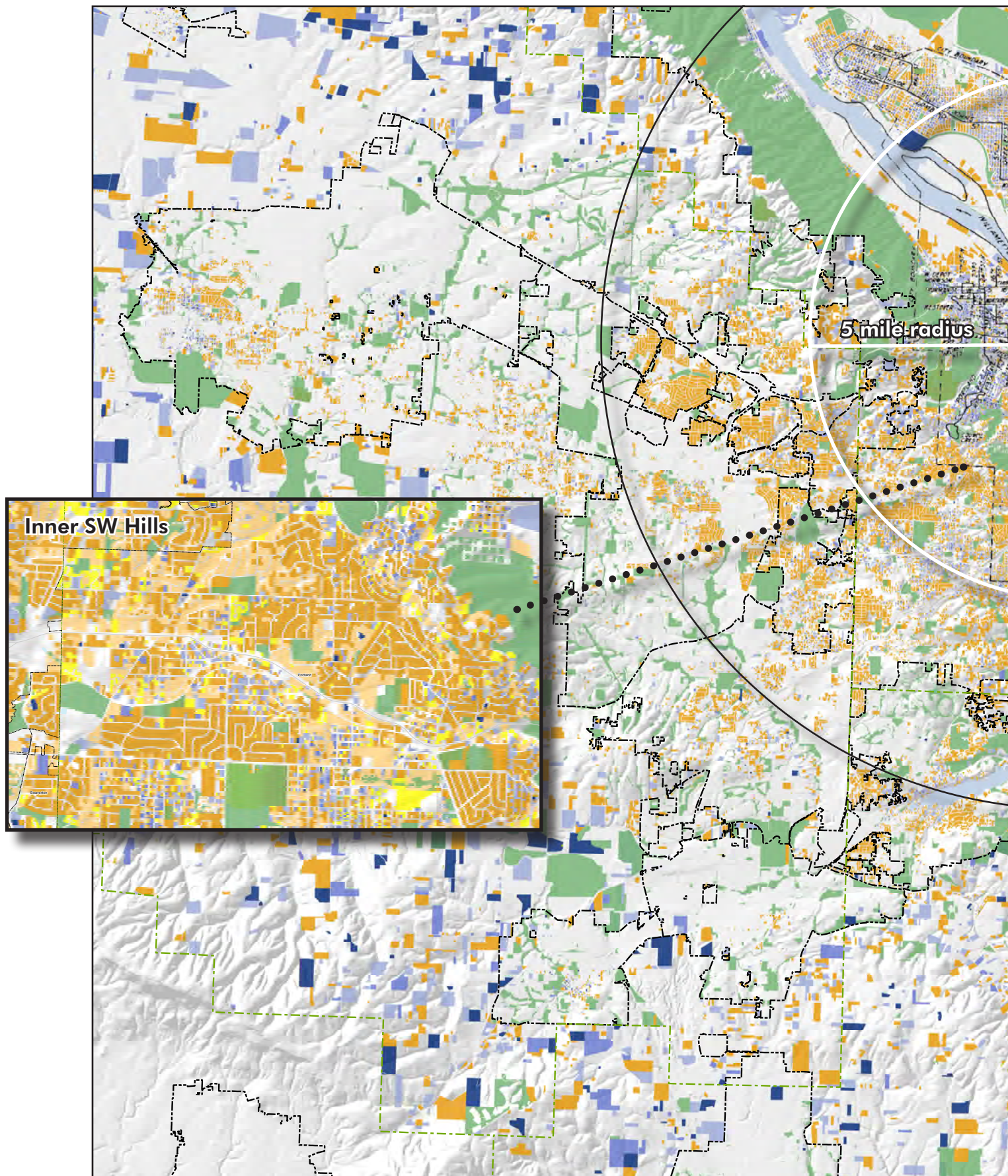
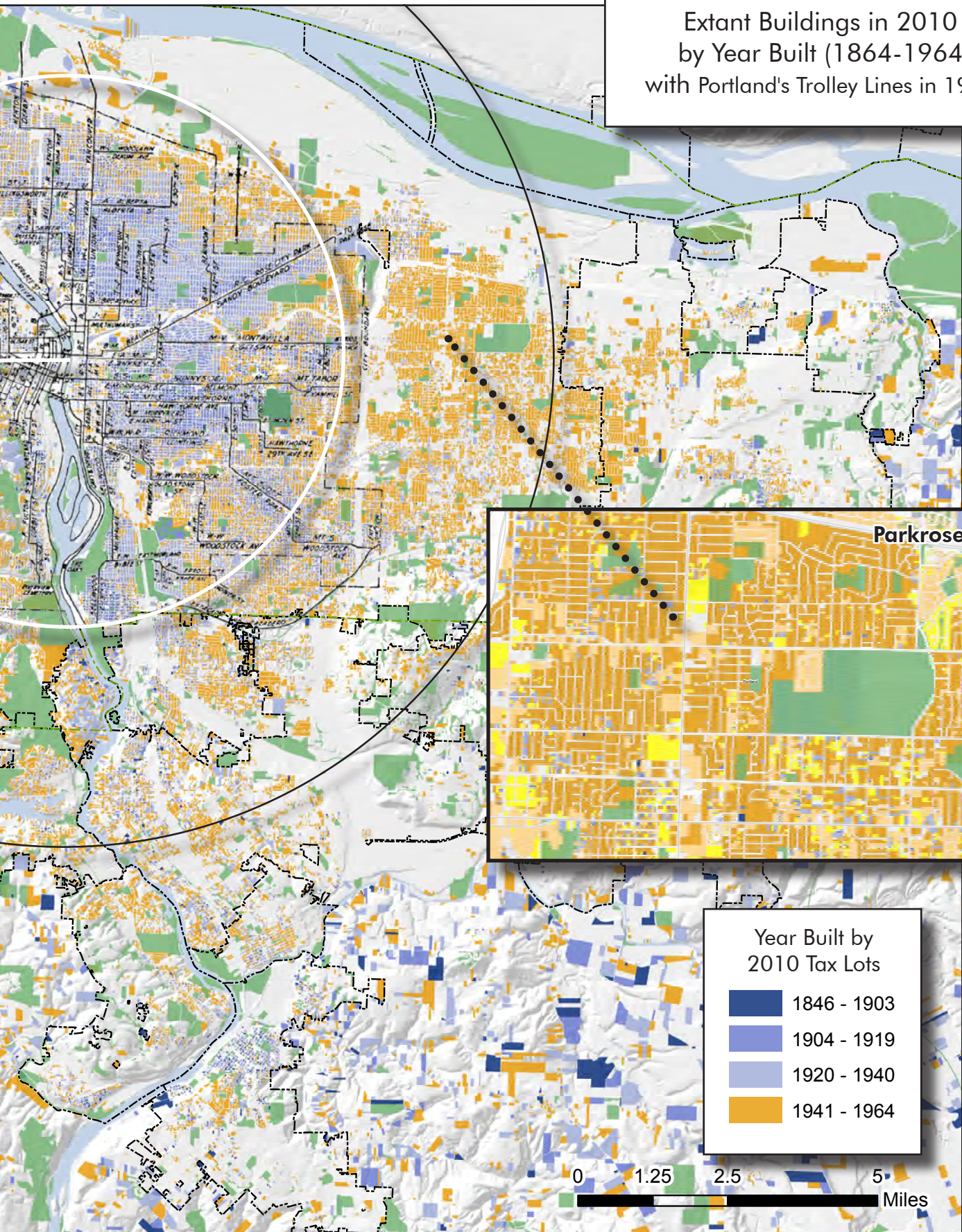


Figure 3. Source: Metro's RLIS, Nov. 2010



Extant Buildings in 2010  
by Year Built (1864-1964)  
with Portland's Trolley Lines in 1924



Parkrose Area

Year Built by  
2010 Tax Lots

- 1846 - 1903
- 1904 - 1919
- 1920 - 1940
- 1941 - 1964

0 1.25 2.5 5 Miles



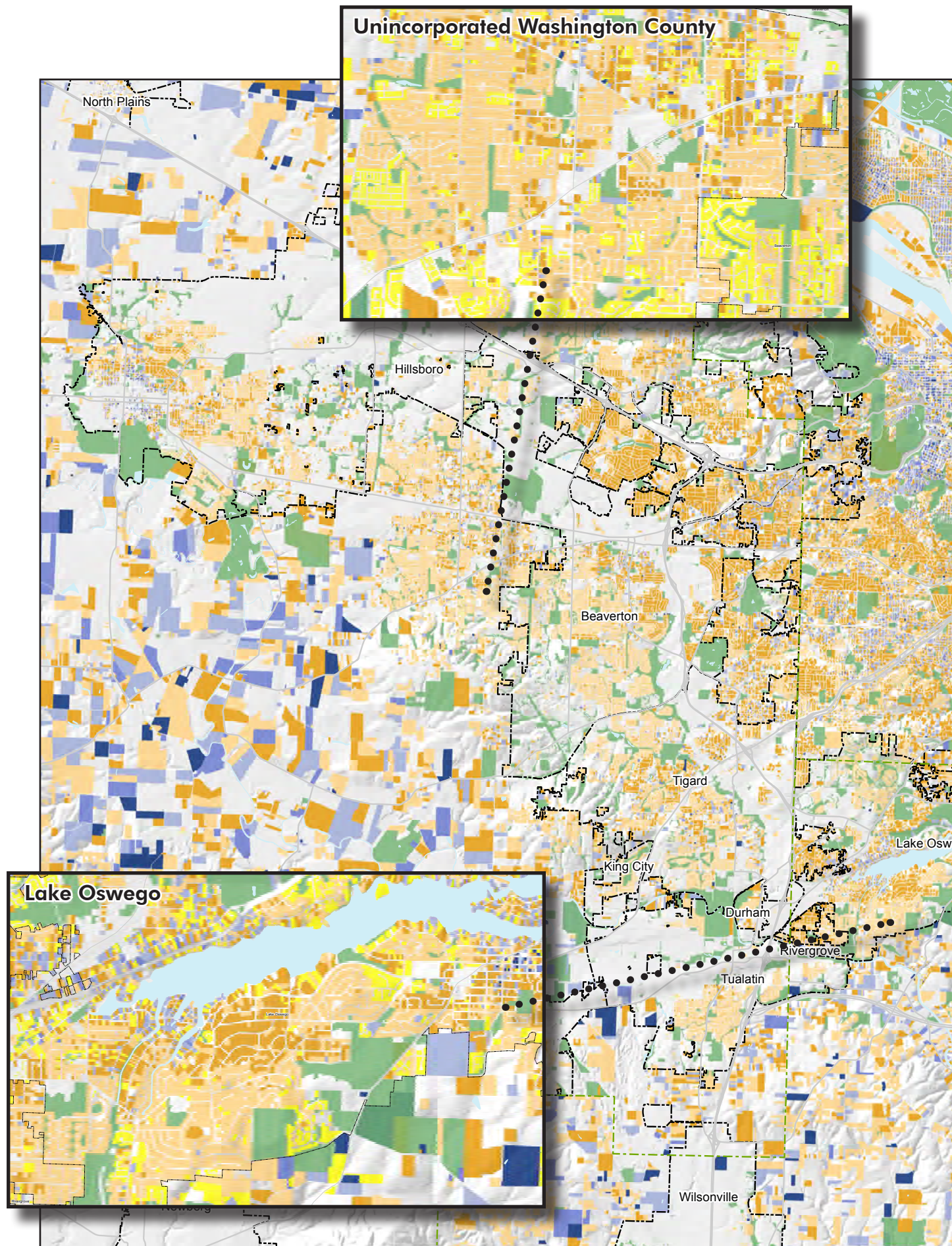
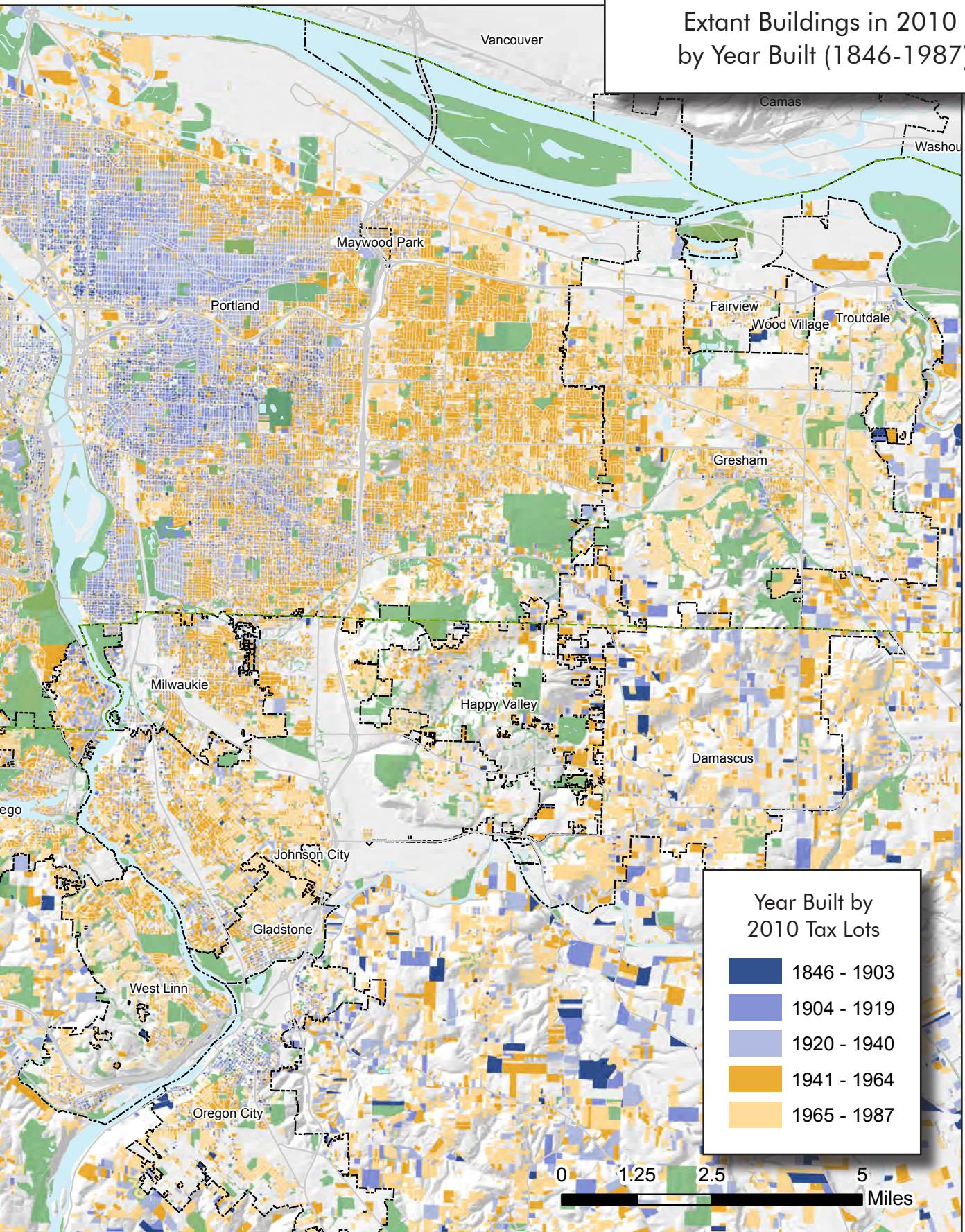


Figure 4. Source: Metro's RLIS, Nov. 2010



## Extant Buildings in 2010 by Year Built (1846-1987)





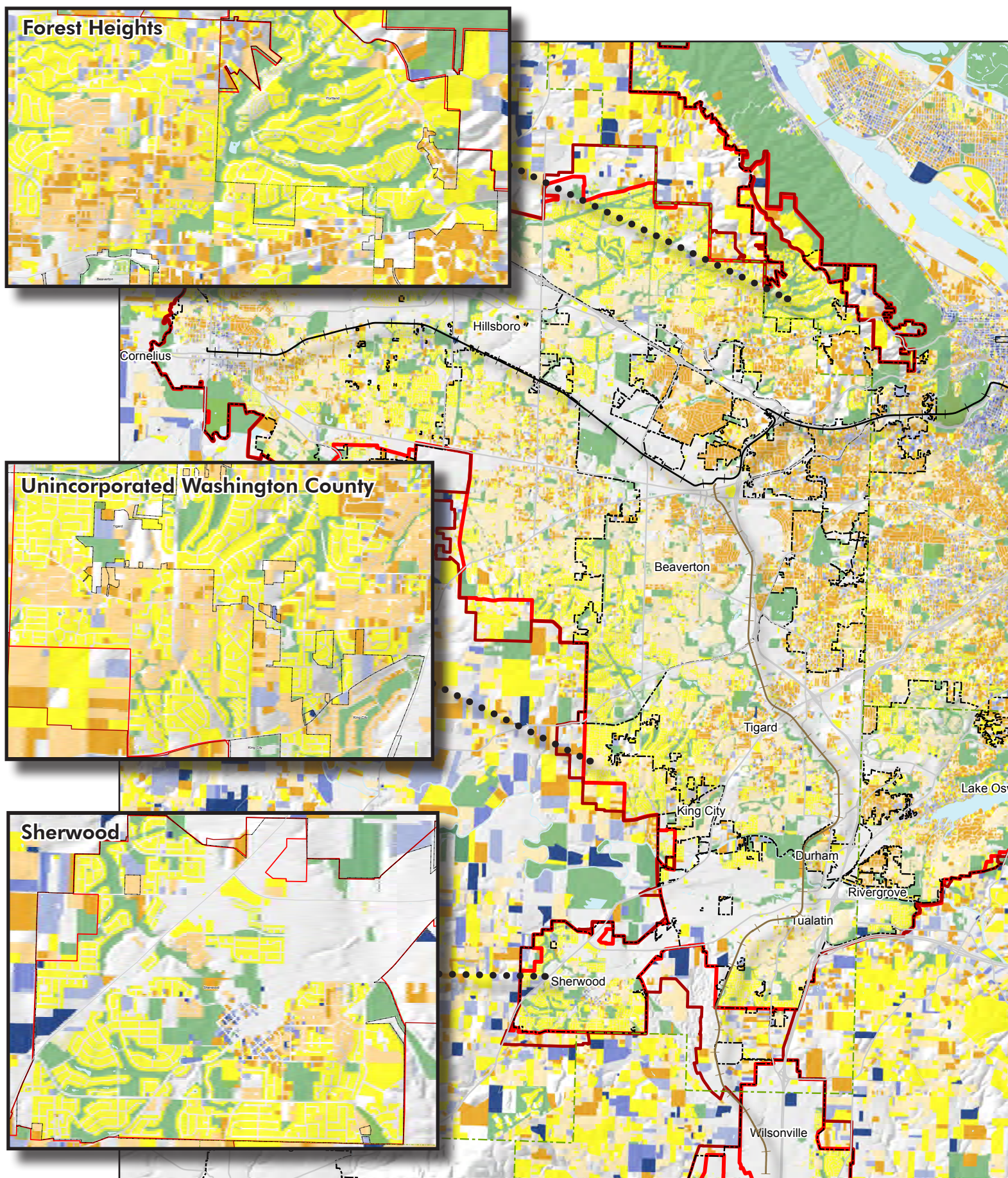
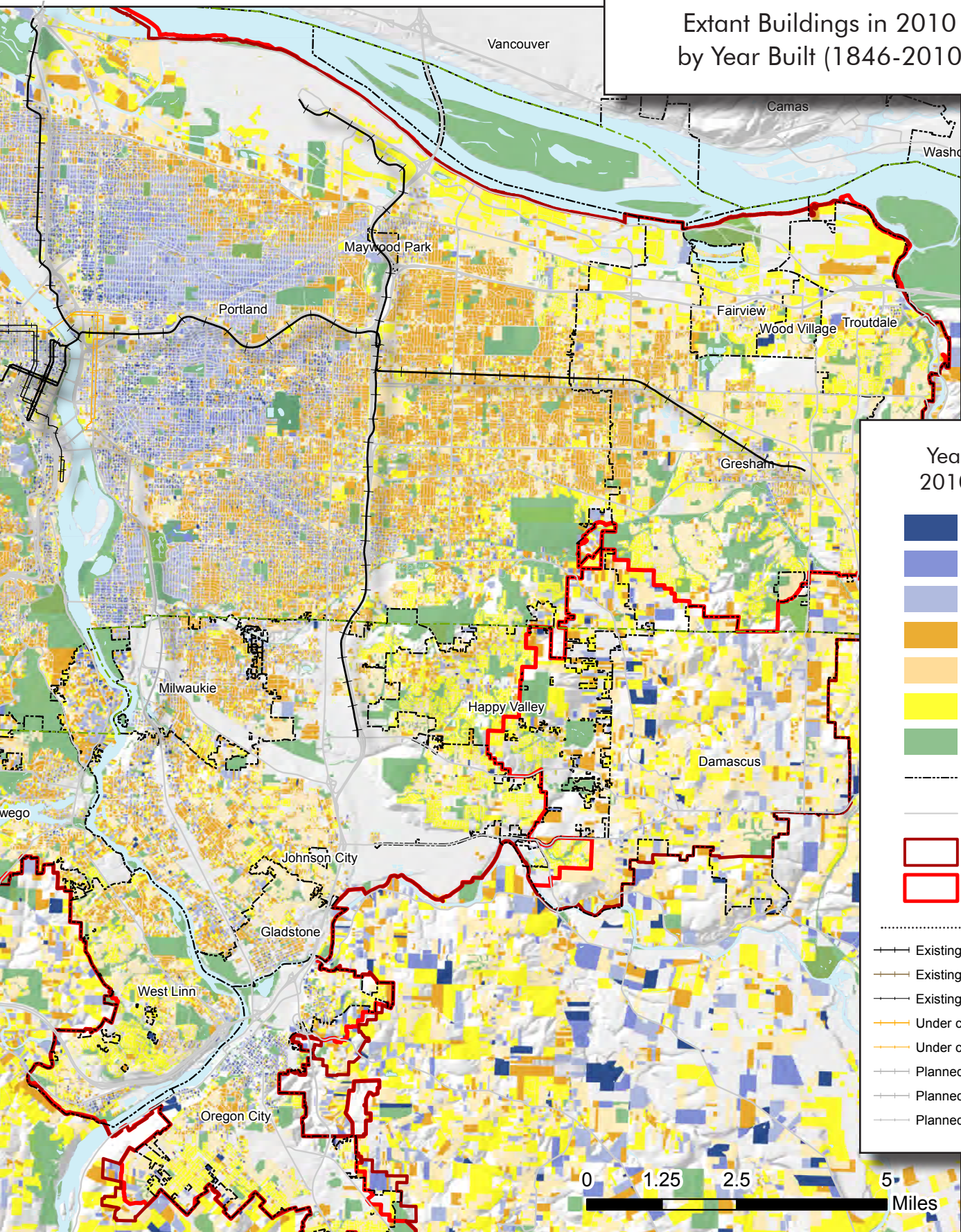


Figure 5. Sources: Metro's RLIS, 1996 and Nov. 2010



# Extant Buildings in 2010 by Year Built (1846-2010)



## Year Built by 2010 Tax Lots

- 1846 - 1903
- 1904 - 1919
- 1920 - 1940
- 1941 - 1964
- 1965 - 1987
- 1988 - 2010
- 2010 Parks
- 2010 Cities
- 2010 Roads
- UGB (2010)
- UGB (1996)

- Existing, MAX
- Existing, WES
- Existing, Street Car
- Under construction, MAX
- Under construction, Street Car
- Planned, MAX
- Planned, MAX/Street Car
- Planned, Street Car